

ANALYTICAL DATA QUALITY DELIVERABLE

**PREPARED BY
Stericycle Environmental Solutions
HATFIELD, PENNSYLVANIA**

SRCL WORK ORDERS: R16080012&44

**FOR
ALS**

CLIENT CONTACT: Ron Mcleod

Data Deliverable Reviewed by:

Vaughan O'Neill

Date *9/6/16*

Stericycle Environmental Solutions Data Deliverables Package

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Chain of Custody

Laboratory Chronicle

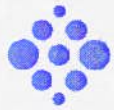
Analytical Sample Results for All Parameters/Final Report

Physical Testing Case Narrative/Non-Conformance Summary Report

Internal Chain of Custody

Physical Testing Raw Data (non-automated data)

Physical Testing Accuracy and Precision Data/Method Blank Summary



Stericycle®
Environmental Solutions

**2869 Sandstone Drive
Hatfield, PA 19440
215-822-8995**

Field Chain-of-Custody

ANALYSIS REQUEST AND CHAIN-OF-CUSTODY RECORD

R16080012

REFERENCE COC NO.: T1-001-TUS

PAGE 1 OF 4

Bill To: CBI Federal Services

Accounts Payable

Report To: CBI Federal Services

Joyce McGee

2410 Cherahala Drive

Knoxville, TN 37932

Project Name/No: Picatinny Arsenal
Sample Team Member: J. McGee, G. Britt, D. Jarvis
Project Manager: Berani Halley
Purchase Order No.:
Required Report Date: Normal

Sample Shipment Date: 7/29/2016
Laboratory Destination: ALS-TUS via ALS-NY
Laboratory Contact: Ancy Sebastian
Project Contact/Phone: Joyce McGee 865-850-7306
Carrier Waybill No.: Lab Courier

Sample Number	Analytical QC	Sample Type/Description	Date/Time Collected	Container Type	Pre-servative	Requested Testing Program	Sample Notes / Expectations	Disposal Record
PY-1001L, PY-1001S		Slurry Waste Feed (liquid and solid fractions)	7/27/2016 1953	1L WM jar	Cool, 4C	Density, Moisture, Heat Content (Btu), Elemental Analysis (C,H,O,N,S)	Use caution in handling solid material - explosive propellant when dry. Sample will settle into solid/liquid phases.	
PY-1003L, PY-1003S		Slurry Waste Feed (liquid and solid fractions)	7/27/2016 1953	250-mL Amber Boston Round	Cool, 4C	% Ash	Weigh solid and measure liquid amount. Report grams and mL of each separately as "S" (solid) and "L" (liquid).	
PY-1007		Auxiliary Fuel	7/27/2016 1940	250-mL Amber Boston Round	Cool, 4C	% Ash	Flammable, Handle w Care. #2 Fuel Oil	
PY-1009		Auxiliary Fuel	7/27/2016 1940	250-mL Amber Boston Round	Cool, 4C	% Ash	Flammable, Handle w Care. #2 Fuel Oil	
PY-1010		Scrubber purge water	7/27/2016 1930	250-mL Amber Boston Round	Cool, 4C	% Ash		

Special Instructions:

Possible Hazard Identification:

Non-haz: Flammable: ☒ Poison B: Unknown: ☒ Sample Disposal: Return to Client: Disposal by Lab: ☒ Archive:

Turnaround Time:

Normal: ☒ Rush: Level of QC Required: I. II. III. Project Specific: ☒ (talk to A. Sebastian)

1. Relinquished by: J. McGee, CB&I Federal Services Date: 7/29/16 1900-2100 1. Received by: Greg Bordell Date: 29-JULY-16 Time: 21:00
2. Relinquished by: [Signature] Date: 8/1/16 1540 2. Received by: [Signature] Date: 7/30/16 Time: 1545

Comments: If samples not received in good condition contact Joyce McGee (865)-850-7306 immediately.

Relinquished: [Signature]

[Signature]

8-2-16 09:39

R14080012
Ash

Reference COC Number: T1-001-TUS

ANALYSIS REQUEST AND CHAIN-OF-CUSTODY RECORD (Cont.)

PAGE 2 OF 4

Project Name/No.: Picatinny Arsenal

Laboratory Destination: ALS-TUS

Sample Number	Analy QC	Sample Type/ Description	Date/Time Collected	Container Type	Pre-servative	Requested Testing Program	Sample Notes / Expectations	Disposal Record
PY-1015		Ash Spiking Solution	7/27/2016 2005	250-mL Amber Boston Round	Cool, 4C	Density		
PY-1016		Ash Spiking Solution	7/27/2016 2005	250-mL Amber Boston Round	Cool, 4C	% Ash	Use caution for %Ash, slowly drive off water. Critical measurement.	
PY-2001L, PY-2001S		Slurry Waste Feed (liquid and solid fractions) ✓	7/28/2016 1700	1-L WM Glass	Cool, 4C	Density, Moisture, Heat Content (Btu), Elemental Analysis (C,H,O,N,S),	Use caution in handling solid material - explosive propellant when dry. Sample will settle into solid/liquid phases. Weigh solid and measure liquid amount.	
PY-2002L, PY-2002S ✓		Slurry Waste Feed (liquid and solid fractions) ✓	7/28/2016 1700	1-L WM Glass	Cool, 4C	Density, Moisture, Heat Content (Btu), Elemental Analysis (C,H,O,N,S),	Report grams and mL of each separately as "S" (solid) and "L" (liquid).	
PY-2005L, PY-2005S ✓		Slurry Waste Feed (liquid and solid fractions) ✓	7/28/2016 1700	250 mL WM jar	Cool, 4C	% Ash		
PY-2006L, PY-2006S ✓		Slurry Waste Feed (liquid and solid fractions) ✓	7/28/2016 1700	250 mL WM jar	Cool, 4C	% Ash		
PY-2007C		Quench Ash	7/28/2016 1800	120 mL WM jar	Cool, 4C	Density, Moisture Content		
PY-2008C		Quench Ash	7/28/2016 1800	120 mL WM jar	Cool, 4C	Density, Moisture Content		
PY-2011		Auxiliary Fuel	7/28/2016 1715	250-mL Amber Boston Round	Cool, 4C	Density, Heat Content (Btu)	Flammable, Handle w Care. #2 Fuel Oil	
PY-2012		Auxiliary Fuel	7/28/2016 1715	250-mL Amber Boston Round	Cool, 4C	Density, Heat Content (Btu)	Flammable, Handle w Care. #2 Fuel Oil	

R16080012 e

Reference COC Number: T1-001-TUS

ANALYSIS REQUEST AND CHAIN-OF-CUSTODY RECORD (Cont.)

PAGE 3 OF 4Project Name/No.: Picatinny ArsenalLaboratory Destination: ALS-TUS

Sample Number	Analy QC	Sample Type/Description	Date/Time Collected	Container Type	Pre-servative	Requested Testing Program	Sample Notes / Expectations	Disposal Record
PY-2015		Auxiliary Fuel	7/28/2016 1715	250-mL Amber Boston Round	Cool, 4C	% Ash	Flammable, Handle w Care. #2 Fuel Oil	
PY-2016		Auxiliary Fuel	7/28/2016 1715	250-mL Amber Boston Round	Cool, 4C	% Ash	Flammable, Handle w Care. #2 Fuel Oil	
PY-2017		Scrubber purge water	7/28/2016 1705	250-mL Amber Boston Round	Cool, 4C	% Ash		
PY-2018		Scrubber purge water	7/28/2016 1705	250-mL Amber Boston Round	Cool, 4C	% Ash		
PY-2023		Ash Spiking Solution	7/28/2016 1800	250-mL Amber Boston Round	Cool, 4C	Density		
PY-2024		Ash Spiking Solution	7/28/2016 1800	250-mL Amber Boston Round	Cool, 4C	Density		
PY-2025		Ash Spiking Solution	7/28/2016 1800	250-mL Amber Boston Round	Cool, 4C	% Ash	Use caution for %Ash, slowly drive off water. Critical measurement.	
PY-2026		Ash Spiking Solution	7/28/2016 1800	250-mL Amber Boston Round	Cool, 4C	% Ash	Use caution for %Ash, slowly drive off water. Critical measurement.	
PY-3001L, PY-3001S ✓		Slurry Waste Feed (liquid and solid fractions) ✓	7/29/2016 1525	1L WM Glass	Cool, 4C	Density, Moisture, Heat Content (Btu), Elemental Analysis (C,H,O,N,S)	Use caution in handling solid material - explosive propellant when dry. Sample will settle into solid/liquid phases. Weigh solid and measure liquid amount. Report grams and mL of each separately as "S" (solid) and "L" (liquid).	
PY-3003L, PY-3003S ✓		Slurry Waste Feed (liquid and solid fractions)	7/29/2016 1525	250 mL WM jar	Cool, 4C	% Ash		
PY-3004B		Kiln Ash	7/29/2016 1545	120 mL WM jar	Cool, 4C	Density, Moisture Content		
PY-3007		Auxiliary Fuel	7/29/2016 1535	250-mL Amber Boston Round	Cool, 4C	Density, Heat Content (Btu)	Flammable, Handle w Care. #2 Fuel Oil	

ANALYSIS REQUEST AND CHAIN-OF-CUSTODY RECORD

R16080044

REFERENCE COC NO.: T2-Slurry Only

PAGE 1 OF 2

Bill To: CBI Federal Services
Accounts Payable

Project Name/No: Picatinny Arsenal
Sample Team Member: J. McGee, G. Britt, D. Jarvis, G. Ward
Project Manager: Berani Halley
Purchase Order No.: _____
Required Report Date: Normal

Sample Shipment Date: 8/03/2016
Laboratory Destination: ALS-NY - HOLD
Laboratory Contact: Ancy Sebastian
Project Contact/Phone: Joyce McGee 865-850-7306
Carrier Waybill No.: Lab Courier

Report To: CBI Federal Services
Joyce McGee
2410 Cherahala Drive
Knoxville, TN 37932

Sample Number	Analytical QC	Sample Type/Description	Date/Time Collected	Container Type	Pre-servative	Requested Testing Program	Sample Notes / Expectations	Disposal Record
PY-4001L, PY-4001S		Slurry Waste Feed (liquid and solid fractions)	8/01/2016 1540	1L WM jar	Cool, 4C	Density, Moisture, Heat Content (Btu), Elemental Analysis (C,H,O,N,S)	Use caution in handling solid material - explosive propellant when dry. Sample will settle into solid/liquid phases. Weigh solid and measure liquid amount. Report grams and mL of each separately as "S" (solid) and "L" (liquid).	
PY-4002L PY-4002S			8/01/2016 1540	250 mL WM jar	Cool, 4C	Total Chlorine		
PY-4003L, PY-4003S		Slurry Waste Feed (liquid and solid fractions)	8/01/2016 1540	250-mL Amber Glass	Cool, 4C	% Ash		
PY-4004L PY-4004S		Slurry Waste Feed (Solid and Aqueous Fractions)	8/01/2016 1540	250 mL WM Poly	Cool, 4C	Metals and Hg		
PY-5001L, PY-5001S		Slurry Waste Feed (liquid and solid fractions)	8/02/2016 1325	1L WM jar	Cool, 4C	Density, Moisture, Heat Content (Btu), Elemental Analysis (C,H,O,N,S)		

Special Instructions:

Possible Hazard Identification:

Non-haz: _____ Flammable: X Poison B: _____ Unknown: X

Sample Disposal:

Return to Client: _____ Disposal by Lab: X Archive: _____

Turnaround Time:

Normal: X

Rush: _____

Level of QC Required:

I. _____ II. _____ III. _____

Project Specific: X (talk to A. Sebastian)

1. Relinquished by: J. McGee, CBI Federal Services

Date: 8/3/16

1. Received by: Guy Borchelt

Date: 03/AUG/16

Time: 1500

Time: 19:00

2. Relinquished by: _____

Date: _____

2. Received by: Tamara

Date: 8/4/16

Time: _____

Time: 1630

Comments: If samples not received in good condition contact Joyce McGee (865)-850-7306 immediately.

16080044

Reference COC Number: T2-Slurry Only

ANALYSIS REQUEST AND CHAIN-OF-CUSTODY RECORD (Cont.)

PAGE 2 OF 2Project Name/No.: Picatinny ArsenalLaboratory Destination: ALS-NY - HOLD

Sample Number	Analy QC	Sample Type/ Description	Date/Time Collected	Container Type	Pre-servative	Requested Testing Program	Sample Notes / Expectations	Disposal Record
PY-5003L PY-5003S		Slurry Waste Feed (liquid and solid fractions)	8/02/2016 1325	250 mL WM jar	Cool, 4C	Total Chlorine	Use caution in handling solid material - explosive propellant when dry. Sample will settle into solid/liquid phases. Weigh solid and measure liquid amount. Report grams and mL of each separately as "S" (solid) and "L" (liquid).	
PY-5004L PY-5004S		Slurry Waste Feed (liquid and solid fractions)	8/02/2016 1325	250 mL WM jar	Cool, 4C	Total Chlorine		
PY-5005L, PY-5005S		Slurry Waste Feed (liquid and solid fractions)	8/02/2016 1325	250 mL WM jar	Cool, 4C	% Ash		
PY-5006L, PY-5006S		Slurry Waste Feed (liquid and solid fractions)	8/02/2016 1325	250 mL WM jar	Cool, 4C	% Ash		
PY-5007L PY-5007S	MS/MSD	Slurry Waste Feed (Solid and Aqueous Fractions)	8/02/2016 1325	250 mL WM Poly	Cool, 4C	Metals and Hg		
PY-6000L, PY-6000S		Slurry Waste Feed (liquid and solid fractions)	8/03/2016 1403	1L WM Glass	Cool, 4C	Density, Moisture, Heat Content (Btu), Elemental Analysis (C,H,O,N,S)		
PY-6001L, PY-6001S		Slurry Waste Feed (liquid and solid fractions)	8/03/2016 1403	1L WM Glass	Cool, 4C	Density, Moisture, Heat Content (Btu), Elemental Analysis (C,H,O,N,S)		
PY-6002L PY-6002S		Slurry Waste Feed (liquid and solid fractions)	8/03/2016 1403	250 mL WM jar	Cool, 4C	Total Chlorine		
PY-6003L, PY-6003S		Slurry Waste Feed (liquid and solid fractions)	8/03/2016 1403	250 mL WM jar	Cool, 4C	% Ash		
PY-6004L PY-6004S		Slurry Waste Feed (Solid and Aqueous Fractions)	8/03/2016 1403	250 mL WM Poly	Cool, 4C	Metals and Hg		

Sample Receipt Checklist

Work Order Number: R16080012

Client: ALS

LIMS data entry completed by: VO 8/18/16

Stericycle, Hatfield, Pa

Date/Time received: 8/18/16

Checklist completed by: V. O'Neill

Reviewed by: _____

- | | Carrier: Client | UPS | FedEx | US Mail | Airborne Express | Stericycle Courier | Other: |
|--|-----------------|-----|-------|---------|------------------|--------------------|--------|
| 1. Cooler Temperature: _____ °C | | | | | | | |
| 2. Shipping container/cooler received in good condition? | | | | | | | |
| 3. Sample containers received intact? | | | | | | | |
| 4. Custody seals intact on shipping container/cooler? | | | | | | | |
| 5. Custody seals intact on sample bottles? | | | | | | | |
| 6. Chain of custody present? | | | | | | | |
| If No, have second person check sample delivery group also. | | | | | | | |
| 7. Chain of custody signed - relinquished AND received? | | | | | | | |
| 8. Chain of custody agrees with sample labels? | | | | | | | |
| No extraneous or missing samples; all sampling info (sampler, Air Volumes, dates/times, etc) matches | | | | | | | |
| 9. Samples received in proper containers including headspace requirements? | | | | | | | |
| 10. Do all Containers have sample in them? | | | | | | | |
| 11. Are all samples single phase? (e.g. no Oil and Water, no solids > 1% in Liquid, etc.) | | | | | | | |
| If No the P.M. needs to have instructions from the client on how to properly analyze the samples. | | | | | | | |
| 12. Analysis requirements clearly listed on COC? | | | | | | | |
| 13. Sufficient sample volume received for indicated tests? | | | | | | | |
| 14. All samples received within holding time/sufficient time to start analysis? | | | | | | | |
| 15. Volatile samples received with zero headspace? | | | | | | | |
| Specify: vials (waters) MeOH jars Soil Kit EnCores Other: | | | | | | | |
| 16. Water - pH acceptable upon receipt? | | | | | | | |

Any "No" response must be detailed in the comments section below. If a CAR is not initiated, explain why.

Corrective Action/Resolution (Reference CAR ID #):

Client Notification (Regarding which item #s, Date & time, PSC Employee initials, Person contacted):

Comments:

Stericycle Use Only
circle all applicable codes PM >24 >4pm SUB COMP UR QA

Sample Receipt Checklist

Work Order Number: 216080044

Client: ALS

LIMS data entry completed by: VO 8/19/16

Stericycle, Hatfield, Pa

Date/Time received: 8/19/16

Checklist completed by: V. O'Neill

Reviewed by: _____

1.	Carrier: Client	UPS	FedEx	US Mail	Airborne Express	Stericycle Courier	Other:
2.	Cooler Temperature:			°C	Specify presence of:	Ice	Blue Ice
3.	Shipping container/cooler received in good condition?						
4.	Sample containers received intact?						
5.	Custody seals intact on shipping container/cooler?						
6.	Custody seals intact on sample bottles?						
7.	Chain of custody present?						
<i>If No, have second person check sample delivery group also.</i>							
8.	Chain of custody signed - relinquished AND received?						
9.	Chain of custody agrees with sample labels?						
<i>No extraneous or missing samples; all sampling info (sampler, Air Volumes, dates/times, etc) matches</i>							
10.	Samples received in proper containers including headspace requirements?						
11.	Do all Containers have sample in them?						
12.	Are all samples single phase? (e.g. no Oil and Water, no solids > 1% in Liquid, etc.)						
<i>If No the P.M. needs to have instructions from the client on how to properly analyze the samples.</i>							
13.	Analysis requirements clearly listed on COC?						
14.	Sufficient sample volume received for indicated tests?						
15.	All samples received within holding time/sufficient time to start analysis?						
16.	Volatile samples received with zero headspace?						
Specify: vials (waters) MeOH jars Soil Kit EnCores Other:							
17.	Water - pH acceptable upon receipt?						

Any "No" response must be detailed in the comments section below. If a CAR is not initiated, explain why.

Corrective Action/Resolution (Reference CAR ID #):

Client Notification (Regarding which item #s, Date & time, PSC Employee initials, Person contacted):

Comments:



Stericycle®
Environmental Solutions

**2869 Sandstone Drive
Hatfield, PA 19440
215-822-8995**

Internal Chain-of-Custody Records

Hatfield, PA
INTERNAL CHAIN OF CUSTODY

Hatfield, PA

USE MILITARY TIME

DATE OF SAMPLE TRANSFER TO STORAGE: _____ TIME: _____ BY: _____

[illegible]

COMMENTS:

WORKORDER #: R16080012 f 44

CLIENT ID: ALS

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Environmental Solutions

2869 Sandstone Drive
Hatfield, PA 19440
215-822-8995

Physical Testing Case Narrative/ Non-Conformance Summary

Stericycle Environmental Solutions, Hatfield, PA
Case Narrative/Non-Conformance Summary

Stericycle Work Order #: R16080012&44

Stericycle Sample Numbers #: 01A-24A

Analyst's Name: Vaughan O'Neill, Kyle Kushner

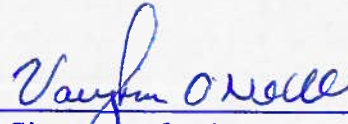
Run Date: 08/18/2016

Today's Date: 09/06/2016

The samples were prepared and analyzed for, according to criteria set forth in ASTM Method D3174, D4239, D5291, D5373, D5865, D482, D420

Physical Testing:

- Duplicate sample criteria for relative percent difference (RPD) met criteria.
- All Laboratory Control Sample recoveries met criteria.
- All calibration criteria were met.



Signature of Laboratory Technical Director

Certificate of Analytical Sample Results for All Parameters/Final Report



2869 Sandstone Dr. Hatfield Pa. 19440
(tel)215-822-8995 (fax)215-822-1293

August 23, 2016

Ron Mcleod
ALS
1435 NorJohn Court #1
Burlington, ON L7L 0E6

TEL: (905) 340-0824
FAX

RE: Picatinny Arsenal

Order No.: R16080012

Dear Ron Mcleod:

Stericycle Environmental Solutions received 16 samples on 8/8/2016 for the analyses presented in the following Certificate of Analytical Results.

The analyses and all data for associated QC met regulatory and/or laboratory specifications. Exceptions will be noted in an enclosed Case Narrative.

The results on the attached Certificate of Analytical results relate only to items tested or to the samples as received by the laboratory. This Certificate of Analytical Results shall not be reproduced, except in full, without the written approval of Stericycle Environmental Solutions, Hatfield, PA.

Please note that any unused portion of the samples will be disposed of 30 days following issuance of report, unless you have requested otherwise.

If you have any questions regarding these tests results, please feel free to call.

Sincerely,

A handwritten signature in blue ink that reads "Vaughan O'Neill". The signature is fluid and cursive, with the first and last names being more prominent.

Vaughan O'Neill
Project Manager

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2869 Sandstone Dr. Hatfield Pa. 19440

(tel)215-822-8995 (fax)215-822-1293

Certificate of Analytical Results

Date: 23-Aug-16

CLIENT: ALS
1435 NorJohn Court #1
Burlington, ON L7L 0E6
Lab Order: R16080012
Project: Picatinny Arsenal

Analyses	As Received Basis	Dry Basis	Units	Method	Date	Analyst
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PY-1001S-Slurry Waste Feed

Lab ID: R16080012-01A

Date Sampled: 07/27/2016

Date Received: 08/08/2016

Matrix: SOLID

PERCENT MOISTURE

Moisture, Total	33.2	%	D 2216	09-Aug-16	VJO
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ASH, COAL

Ash	< 0.0100	%	D3174	16-Aug-16	KKUS
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CARBON, HYDROGEN, NITROGEN, OXYGEN (COAL)

Carbon	16.4	24.6	%	D5291/537	22-Aug-16	KKUS
Hydrogen (Excl. H in Moisture)	2.93	4.39	%			
Hydrogen (Incl. H in Moisture)	6.64		%			
Nitrogen	15.4	23.1	%			
Oxygen (Excl. O in Moisture)	32.0	47.9	%			
Oxygen (Incl. O in Moisture)	61.5		%			

HEATING VALUE, COAL

Heating Value	2610	3,910	Btu/lb	D5865	22-Aug-16	KKUS
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SULFUR

Sulfur	< 0.0100	%	D4239	16-Aug-16	KKUS
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PY-1003S Slurry Waste Feed

Lab ID: R16080012-03A

Date Sampled: 07/27/2016

Date Received: 08/08/2016

Matrix: SOLID

ASH, COAL

Ash	< 0.0100	%	D3174	16-Aug-16	KKUS
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17

< Indicates less than the limit of quantitation

H - Hold Time exceedance



2869 Sandstone Dr. Hatfield Pa. 19440
(tel)215-822-8995 (fax)215-822-1293

Certificate of Analytical Results

Date: 23-Aug-16

CLIENT: ALS
1435 NorJohn Court #1
Burlington, ON L7L 0E6
Lab Order: R16080012
Project: Picatinny Arsenal

Analyses	As Received Basis	Dry Basis	Units	Method	Date	Analyst
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PY-2001S Slurry Waste Feed

Lab ID: R16080012-05A

Date Sampled: 07/28/2016

Date Received: 08/08/2016

Matrix: SOLID

PERCENT MOISTURE

Moisture, Total	39.9	%	D 2216	09-Aug-16	VJO
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ASH, COAL

Ash	< 0.0100	%	D3174	16-Aug-16	KKUS
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CARBON, HYDROGEN, NITROGEN, OXYGEN (COAL)

Carbon	20.7	34.4	%	D5291/537	22-Aug-16	KKUS
Hydrogen (Excl. H in Moisture)	1.88	3.13	%			
Hydrogen (Incl. H in Moisture)	6.35		%			
Nitrogen	14.0	23.3	%			
Oxygen (Excl. O in Moisture)	23.6	39.3	%			
Oxygen (Incl. O in Moisture)	59.0		%			

HEATING VALUE, COAL

Heating Value	2930	4,880	Btu/lb	D5865	22-Aug-16	KKUS
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SULFUR

Sulfur	< 0.0100	%	D4239	16-Aug-16	KKUS
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18

< Indicates less than the limit of quantitation

H - Hold Time exceedance



2869 Sandstone Dr. Hatfield Pa. 19440
(tel)215-822-8995 (fax)215-822-1293

Certificate of Analytical Results

Date: 23-Aug-16

CLIENT: ALS
1435 NorJohn Court #1
Burlington, ON L7L 0E6
Lab Order: R16080012
Project: Picatinny Arsenal

Analyses	As Received Basis	Dry Basis	Units	Method	Date	Analyst
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PY-2002S Slurry Waste Feed

Lab ID: R16080012-07A

Date Sampled: 07/28/2016

Date Received: 08/08/2016

Matrix: SOLID

PERCENT MOISTURE

Moisture, Total	26.0	%	D 2216	09-Aug-16	VJO
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ASH, COAL

Ash	< 0.0100	%	D3174	16-Aug-16	KKUS
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CARBON, HYDROGEN, NITROGEN, OXYGEN (COAL)

Carbon	20.5	27.7	%	D5291/537	22-Aug-16	KKUS
Hydrogen (Excl. H in Moisture)	2.76	3.73	%			
Hydrogen (Incl. H in Moisture)	5.67		%			
Nitrogen	18.5	25.0	%			
Oxygen (Excl. O in Moisture)	32.3	43.6	%			
Oxygen (Incl. O in Moisture)	55.4		%			

HEATING VALUE, COAL

Heating Value	2820	3,810	Btu/lb	D5865	22-Aug-16	KKUS
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SULFUR

Sulfur	< 0.0100	%	D4239	16-Aug-16	KKUS
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PY-2005S Slurry Waste Feed

Lab ID: R16080012-09A

Date Sampled: 07/28/2016

Date Received: 08/08/2016

Matrix: SOLID

ASH, COAL

Ash	< 0.0100	%	D3174	16-Aug-16	KKUS
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20 19

< Indicates less than the limit of quantitation

H - Hold Time exceedance



2869 Sandstone Dr. Hatfield Pa. 19440

(tel)215-822-8995 (fax)215-822-1293

Certificate of Analytical Results

Date: 23-Aug-16

CLIENT: ALS
1435 NorJohn Court #1
Burlington, ON L7L 0E6
Lab Order: R16080012
Project: Picatinny Arsenal

Analyses	As Received Basis	Dry Basis	Units	Method	Date	Analyst
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PY-2006S Slurry Waste Feed

Lab ID: R16080012-11A

Date Sampled: 07/27/2016

Date Received: 08/08/2016

Matrix: SOLID

ASH, COAL

Ash	0.130	0	%	D3174	16-Aug-16	KKUS
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PY-3001S Slurry Waste Feed

Lab ID: R16080012-13A

Date Sampled: 07/29/2016

Date Received: 08/08/2016

Matrix: SOLID

PERCENT MOISTURE

Moisture, Total	32.7		%	D 2216	09-Aug-16	VJO
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ASH, COAL

Ash	< 0.0100		%	D3174	16-Aug-16	KKUS
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CARBON, HYDROGEN, NITROGEN, OXYGEN (COAL)

Carbon	21.7	32.2	%	D5291/537	22-Aug-16	KKUS
Hydrogen (Excl. H in Moisture)	2.24	3.33	%			
Hydrogen (Incl. H in Moisture)	5.90		%			
Nitrogen	16.1	23.9	%			
Oxygen (Excl. O in Moisture)	27.2	40.4	%			
Oxygen (Incl. O in Moisture)	56.2		%			

HEATING VALUE, COAL

Heating Value	2650	3,940	Btu/lb	D5865	22-Aug-16	KKUS
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SULFUR

Sulfur	< 0.0100		%	D4239	16-Aug-16	KKUS
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20

< Indicates less than the limit of quantitation

H - Hold Time exceedance



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Certificate of Analytical Results

Date: 23-Aug-16

CLIENT: ALS
1435 NorJohn Court #1
Burlington, ON L7L 0E6
Lab Order: R16080012
Project: Picatinny Arsenal

Analyses	As Received Basis	Dry Basis	Units	Method	Date	Analyst
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PY-3003S Slurry Waste Feed

Lab ID: R16080012-15A

Date Sampled: 07/29/2016

Date Received: 08/08/2016

Matrix: SOLID

ASH, COAL

Ash	< 0.0100	%	D3174	16-Aug-16	KKUS
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< Indicates less than the limit of quantitation

H - Hold Time exceedance



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Certificate of Analytical Results

Date: 23-Aug-16

CLIENT: ALS
1435 NorJohn Court #1
Burlington, ON L7L 0E6

Lab Order: R16080012

Project: Picatinny Arsenal

Lab ID: R16080012-02 **Date Received:** 08/08/2016 **Date Sampled:** 07/27/2016 19:53

Client Sample ID: PY-1001L-Slurry Waste Feed **Matrix:** AQUEOUS

Analyses	Result	Limit	Qual	Units	DF	Date Analyzed
ASH, OIL		D482				Analyst: KKUS
Ash	< 0.0100	0.0100		%	1	8/15/2016
CARBON, HYDROGEN, NITROGEN (OIL)		D5291				Analyst: KKUS
Carbon	1.70	0.01		%	1	8/22/2016
Hydrogen	11.6	0.01		%	1	8/22/2016
Nitrogen	0.72	0.01		%	1	8/22/2016
HEATING VALUE BTU/LB		D240				Analyst: KKUS
Heating Value	140	50		Btu/lb	1	8/22/2016
OXYGEN BY DIFFERENCE		D5291				Analyst: KKUS
Oxygen	86.0	0.0100		%	1	8/22/2016
SULFUR		D1552				Analyst: KKUS
Sulfur	< 0.0100	0.0100		%	1	8/16/2016

Lab ID: R16080012-04 **Date Received:** 08/08/2016 **Date Sampled:** 07/27/2016 19:53

Client Sample ID: PY-1003L Slurry Waste Feed **Matrix:** AQUEOUS

Analyses	Result	Limit	Qual	Units	DF	Date Analyzed
ASH, OIL		D482				Analyst: KKUS
Ash	< 0.0100	0.0100		%	1	8/15/2016

22

Qualifiers:

BRL - Below Reporting Limit
J - Analyte detected below quantitation limits
B - Analyte detected in the associated Method Blank
* - Value exceeds Maximum Contaminant Level
N - Tentatively identified compound based on mass spectral library search

S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
E - Value above quantitation range
H - Hold Time exceedance



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Date: 23-Aug-16

CLIENT: ALS
1435 NorJohn Court #1
Burlington, ON L7L 0E6
Project: Picatinny Arsenal

Lab Order: R16080012

Lab ID: R16080012-06 **Date Received:** 08/08/2016 **Date Sampled:** 07/28/2016 17:00
Client Sample ID: PY-2001L Slurry Waste Feed **Matrix:** AQUEOUS

Analyses	Result	Limit	Qual	Units	DF	Date Analyzed
ASH, OIL		D482				Analyst: KKUS
Ash	< 0.0100	0.0100		%	1	8/15/2016
CARBON, HYDROGEN, NITROGEN (OIL)		D5291				Analyst: KKUS
Carbon	0.41	0.01		%	1	8/22/2016
Hydrogen	11.3	0.01		%	1	8/22/2016
Nitrogen	0.67	0.01		%	1	8/22/2016
HEATING VALUE BTU/LB		D240				Analyst: KKUS
Heating Value	100	50		Btu/lb	1	8/22/2016
OXYGEN BY DIFFERENCE		D5291				Analyst: KKUS
Oxygen	87.6	0.0100		%	1	8/22/2016
SULFUR		D1552				Analyst: KKUS
Sulfur	< 0.0100	0.0100		%	1	8/16/2016

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Qualifiers:

BRL - Below Reporting Limit
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N - Tentatively identified compound based on mass spectral library search

S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
E - Value above quantitation range
H - Hold Time exceedance



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Date: 23-Aug-16

CLIENT: ALS
1435 NorJohn Court #1
Burlington, ON L7L 0E6

Lab Order: R16080012

Project: Picatinny Arsenal

Lab ID: R16080012-08 **Date Received:** 08/08/2016 **Date Sampled:** 07/28/2016 17:00

Client Sample ID: PY-2002L Slurry Waste Feed **Matrix:** AQUEOUS

Analyses	Result	Limit	Qual	Units	DF	Date Analyzed
ASH, OIL		D482				Analyst: KKUS
Ash	< 0.0100	0.0100		%	1	8/15/2016
CARBON, HYDROGEN, NITROGEN (OIL)		D5291				Analyst: KKUS
Carbon	0.42	0.01		%	1	8/22/2016
Hydrogen	11.5	0.01		%	1	8/22/2016
Nitrogen	0.74	0.01		%	1	8/22/2016
HEATING VALUE BTU/LB		D240				Analyst: KKUS
Heating Value	50	50		Btu/lb	1	8/22/2016
OXYGEN BY DIFFERENCE		D5291				Analyst: KKUS
Oxygen	87.3	0.0100		%	1	8/22/2016
SULFUR		D1552				Analyst: KKUS
Sulfur	< 0.0100	0.0100		%	1	8/16/2016

Lab ID: R16080012-10 **Date Received:** 08/08/2016 **Date Sampled:** 07/28/2016 17:00

Client Sample ID: PY-2005L Slurry Waste Feed **Matrix:** AQUEOUS

Analyses	Result	Limit	Qual	Units	DF	Date Analyzed
ASH, OIL		D482				Analyst: KKUS
Ash	< 0.0100	0.0100		%	1	8/15/2016

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Qualifiers:

BRL - Below Reporting Limit

J - Analyte detected below quantitation limits

B - Analyte detected in the associated Method Blank

* - Value exceeds Maximum Contaminant Level

N - Tentatively identified compound based on mass spectral library search

S - Spike Recovery outside accepted recovery limits

R - RPD outside accepted recovery limits

E - Value above quantitation range

H - Hold Time exceedance

Certificate of Analytical Results

Date: 23-Aug-16

CLIENT: **ALS**
 1435 NorJohn Court #1
 Burlington, ON L7L 0E6

Lab Order: R16080012

Project: Picatinny Arsenal

Lab ID: R16080012-12 **Date Received:** 08/08/2016 **Date Sampled:** 07/28/2016 17:00

Client Sample ID: PY-2006L Slurry Waste Feed **Matrix:** AQUEOUS

Analyses	Result	Limit	Qual	Units	DF	Date Analyzed
ASH, OIL		D482				Analyst: KKUS
Ash	< 0.0100	0.0100		%	1	8/15/2016

Lab ID: R16080012-14 **Date Received:** 08/08/2016 **Date Sampled:** 07/29/2016 15:25

Client Sample ID: PY-3001L Slurry Waste Feed **Matrix:** AQUEOUS

Analyses	Result	Limit	Qual	Units	DF	Date Analyzed
ASH, OIL		D482				Analyst: KKUS
Ash	< 0.0100	0.0100		%	1	8/15/2016
CARBON, HYDROGEN, NITROGEN (OIL)		D5291				Analyst: KKUS
Carbon	0.40	0.01		%	1	8/22/2016
Hydrogen	11.3	0.01		%	1	8/22/2016
Nitrogen	0.72	0.01		%	1	8/22/2016

HEATING VALUE BTU/LB	D240					Analyst: KKUS
Heating Value	< 50.000	50		Btu/lb	1	8/22/2016

OXYGEN BY DIFFERENCE	D5291					Analyst: KKUS
Oxygen	87.6	0.0100		%	1	8/22/2016

SULFUR	D1552					Analyst: KKUS
Sulfur	< 0.0100	0.0100		%	1	8/16/2016

25

Qualifiers:

BRL - Below Reporting Limit

J - Analyte detected below quantitation limits

B - Analyte detected in the associated Method Blank

* - Value exceeds Maximum Contaminant Level

N - Tentatively identified compound based on mass spectral library search

S - Spike Recovery outside accepted recovery limits

R - RPD outside accepted recovery limits

E - Value above quantitation range

H - Hold Time exceedance

Certificate of Analytical Results

Date: 23-Aug-16

CLIENT:	ALS	Lab Order:	R16080012
	1435 NorJohn Court #1		
	Burlington, ON L7L 0E6		
Project:	Picatinny Arsenal		

Lab ID: R16080012-16 **Date Received:** 08/08/2016 **Date Sampled:** 07/29/2016 15:25

Client Sample ID: PY-3003L Slurry Waste Feed **Matrix:** AQUEOUS

Analyses	Result	Limit	Qual	Units	DF	Date Analyzed
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ASH, OIL		D482				Analyst: KKUS
Ash	< 0.0100	0.0100		%	1	8/15/2016

26

Qualifiers:

BRL - Below Reporting Limit
J - Analyte detected below quantitation limits
B - Analyte detected in the associated Method Blank
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R - RPD outside accepted recovery limits
E - Value above quantitation range
H - Hold Time exceedance



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Certificate of Analytical Results

Date: 23-Aug-16

CLIENT: ALS
1435 NorJohn Court #1
Burlington, ON L7L 0E6

Lab Order: R16080012

Project: Picatinny Arsenal

Lab ID: R16080012-02 **Date Received:** 08/08/2016 **Date Sampled:** 07/27/2016 19:53

Client Sample ID: PY-1001L-Slurry Waste Feed **Matrix:** AQUEOUS

Analyses	Result	Limit	Qual	Units	DF	Date Analyzed
ASH, OIL		D482				Analyst: KKUS
Ash	< 0.0100	0.0100		%	1	8/15/2016
CARBON, HYDROGEN, NITROGEN (OIL)		D5291				Analyst: KKUS
Carbon	1.70	0.01		%	1	8/22/2016
Hydrogen	11.6	0.01		%	1	8/22/2016
Nitrogen	0.72	0.01		%	1	8/22/2016
HEATING VALUE BTU/LB		D240				Analyst: KKUS
Heating Value	140	50		Btu/lb	1	8/22/2016
OXYGEN BY DIFFERENCE		D5291				Analyst: KKUS
Oxygen	86.0	0.0100		%	1	8/22/2016
SULFUR		D1552				Analyst: KKUS
Sulfur	< 0.0100	0.0100		%	1	8/16/2016

Lab ID: R16080012-04 **Date Received:** 08/08/2016 **Date Sampled:** 07/27/2016 19:53

Client Sample ID: PY-1003L Slurry Waste Feed **Matrix:** AQUEOUS

Analyses	Result	Limit	Qual	Units	DF	Date Analyzed
ASH, OIL		D482				Analyst: KKUS
Ash	< 0.0100	0.0100		%	1	8/15/2016

27

Qualifiers:

BRL - Below Reporting Limit
J - Analyte detected below quantitation limits
B - Analyte detected in the associated Method Blank
* - Value exceeds Maximum Contaminant Level
N - Tentatively identified compound based on mass spectral library search

S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
E - Value above quantitation range
H - Hold Time exceedance

Certificate of Analytical Results

Date: 23-Aug-16

CLIENT:	ALS	Lab Order:	R16080012
	1435 NorJohn Court #1		
	Burlington, ON L7L 0E6		
Project:	Picatinny Arsenal		

Lab ID:	R16080012-06	Date Received:	08/08/2016	Date Sampled:	07/28/2016 17:00
Client Sample ID:	PY-2001L Slurry Waste Feed			Matrix:	AQUEOUS

Analyses	Result	Limit	Qual	Units	DF	Date Analyzed
ASH, OIL		D482				Analyst: KKUS
Ash	< 0.0100	0.0100		%	1	8/15/2016
CARBON, HYDROGEN, NITROGEN (OIL)		D5291				Analyst: KKUS
Carbon	0.41	0.01		%	1	8/22/2016
Hydrogen	11.3	0.01		%	1	8/22/2016
Nitrogen	0.67	0.01		%	1	8/22/2016
HEATING VALUE BTU/LB		D240				Analyst: KKUS
Heating Value	100	50		Btu/lb	1	8/22/2016
OXYGEN BY DIFFERENCE		D5291				Analyst: KKUS
Oxygen	87.6	0.0100		%	1	8/22/2016
SULFUR		D1552				Analyst: KKUS
Sulfur	< 0.0100	0.0100		%	1	8/16/2016

28

Qualifiers:

- BRL - Below Reporting Limit
- J - Analyte detected below quantitation limits
- B - Analyte detected in the associated Method Blank
- * - Value exceeds Maximum Contaminant Level
- N - Tentatively identified compound based on mass spectral library search

- S - Spike Recovery outside accepted recovery limits
- R - RPD outside accepted recovery limits
- E - Value above quantitation range
- H - Hold Time exceedance

Certificate of Analytical Results
Date: 23-Aug-16

CLIENT: ALS
 1435 NorJohn Court #1
 Burlington, ON L7L 0E6

Lab Order: R16080012

Project: Picatinny Arsenal

Lab ID: R16080012-08 **Date Received:** 08/08/2016 **Date Sampled:** 07/28/2016 17:00
Client Sample ID: PY-2002L Slurry Waste Feed **Matrix:** AQUEOUS

Analyses	Result	Limit	Qual	Units	DF	Date Analyzed
ASH, OIL		D482				Analyst: KKUS
Ash	< 0.0100	0.0100		%	1	8/15/2016
CARBON, HYDROGEN, NITROGEN (OIL)		D5291				Analyst: KKUS
Carbon	0.42	0.01		%	1	8/22/2016
Hydrogen	11.5	0.01		%	1	8/22/2016
Nitrogen	0.74	0.01		%	1	8/22/2016
HEATING VALUE BTU/LB		D240				Analyst: KKUS
Heating Value	50	50		Btu/lb	1	8/22/2016
OXYGEN BY DIFFERENCE		D5291				Analyst: KKUS
Oxygen	87.3	0.0100		%	1	8/22/2016
SULFUR		D1552				Analyst: KKUS
Sulfur	< 0.0100	0.0100		%	1	8/16/2016

Lab ID: R16080012-10 **Date Received:** 08/08/2016 **Date Sampled:** 07/28/2016 17:00
Client Sample ID: PY-2005L Slurry Waste Feed **Matrix:** AQUEOUS

Analyses	Result	Limit	Qual	Units	DF	Date Analyzed
ASH, OIL		D482				Analyst: KKUS
Ash	< 0.0100	0.0100		%	1	8/15/2016

29

Qualifiers:

BRL - Below Reporting Limit
 J - Analyte detected below quantitation limits
 B - Analyte detected in the associated Method Blank
 * - Value exceeds Maximum Contaminant Level
 N - Tentatively identified compound based on mass spectral library search

S - Spike Recovery outside accepted recovery limits
 R - RPD outside accepted recovery limits
 E - Value above quantitation range
 H - Hold Time exceedance



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Certificate of Analytical Results

Date: 23-Aug-16

CLIENT: ALS
1435 NorJohn Court #1
Burlington, ON L7L 0E6

Lab Order: R16080012

Project: Picatinny Arsenal

Lab ID: R16080012-12 **Date Received:** 08/08/2016 **Date Sampled:** 07/28/2016 17:00

Client Sample ID: PY-2006L Slurry Waste Feed **Matrix:** AQUEOUS

Analyses	Result	Limit	Qual	Units	DF	Date Analyzed
ASH, OIL		D482				Analyst: KKUS
Ash	< 0.0100	0.0100		%	1	8/15/2016

Lab ID: R16080012-14 **Date Received:** 08/08/2016 **Date Sampled:** 07/29/2016 15:25

Client Sample ID: PY-3001L Slurry Waste Feed **Matrix:** AQUEOUS

Analyses	Result	Limit	Qual	Units	DF	Date Analyzed
ASH, OIL		D482				Analyst: KKUS
Ash	< 0.0100	0.0100		%	1	8/15/2016
CARBON, HYDROGEN, NITROGEN (OIL)		D5291				Analyst: KKUS
Carbon	0.40	0.01		%	1	8/22/2016
Hydrogen	11.3	0.01		%	1	8/22/2016
Nitrogen	0.72	0.01		%	1	8/22/2016

HEATING VALUE BTU/LB		D240				Analyst: KKUS
Heating Value	< 50.000	50		Btu/lb	1	8/22/2016

OXYGEN BY DIFFERENCE		D5291				Analyst: KKUS
Oxygen	87.6	0.0100		%	1	8/22/2016

SULFUR		D1552				Analyst: KKUS
Sulfur	< 0.0100	0.0100		%	1	8/16/2016

30

Qualifiers:
BRL - Below Reporting Limit
J - Analyte detected below quantitation limits
B - Analyte detected in the associated Method Blank
* - Value exceeds Maximum Contaminant Level
N - Tentatively identified compound based on mass spectral library search

S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
E - Value above quantitation range
H - Hold Time exceedance

Certificate of Analytical Results

Date: 23-Aug-16

CLIENT:	ALS	Lab Order:	R16080012
	1435 NorJohn Court #1		
	Burlington, ON L7L 0E6		
Project:	Picatinny Arsenal		

Lab ID:	R16080012-16	Date Received: 08/08/2016	Date Sampled: 07/29/2016 15:25
Client Sample ID:	PY-3003L Slurry Waste Feed		Matrix: AQUEOUS

Analyses	Result	Limit	Qual	Units	DF	Date Analyzed
ASH, OIL		D482				Analyst: KKUS
Ash	< 0.0100	0.0100		%	1	8/15/2016

3/

Qualifiers:

BRL - Below Reporting Limit
 J - Analyte detected below quantitation limits
 B - Analyte detected in the associated Method Blank
 * - Value exceeds Maximum Contaminant Level
 N - Tentatively identified compound based on mass spectral library search

S - Spike Recovery outside accepted recovery limits
 R - RPD outside accepted recovery limits
 E - Value above quantitation range
 H - Hold Time exceedance



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Certificate of Analytical Results

Date: 23-Aug-16

CLIENT: ALS
1435 NorJohn Court #1
Burlington, ON L7L 0E6

Lab Order: R16080012

Project: Picatinny Arsenal

Lab ID: R16080012-01 **Date Received:** 08/08/2016 **Date Sampled:** 07/27/2016 19:53

Client Sample ID: PY-1001S-Slurry Waste Feed **Matrix:** SOLID

Analyses	Result	Limit	Qual	Units	DF	Date Analyzed
GRAVITY Density	10.76	D1298 0.001000		lbs/gal	1	Analyst: KKUS 8/17/2016

Lab ID: R16080012-02 **Date Received:** 08/08/2016 **Date Sampled:** 07/27/2016 19:53

Client Sample ID: PY-1001L-Slurry Waste Feed **Matrix:** AQUEOUS

Analyses	Result	Limit	Qual	Units	DF	Date Analyzed
GRAVITY Density	8.470	D1298 0.001000		lbs/gal	1	Analyst: KKUS 8/17/2016

Lab ID: R16080012-05 **Date Received:** 08/08/2016 **Date Sampled:** 07/28/2016 17:00

Client Sample ID: PY-2001S Slurry Waste Feed **Matrix:** SOLID

Analyses	Result	Limit	Qual	Units	DF	Date Analyzed
GRAVITY Density	6.510	D1298 0.001000		lbs/gal	1	Analyst: KKUS 8/17/2016

Lab ID: R16080012-06 **Date Received:** 08/08/2016 **Date Sampled:** 07/28/2016 17:00

Client Sample ID: PY-2001L Slurry Waste Feed **Matrix:** AQUEOUS

Analyses	Result	Limit	Qual	Units	DF	Date Analyzed
GRAVITY Density	8.470	D1298 0.001000		lbs/gal	1	Analyst: KKUS 8/17/2016

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Qualifiers:

BRL - Below Reporting Limit
J - Analyte detected below quantitation limits
B - Analyte detected in the associated Method Blank
* - Value exceeds Maximum Contaminant Level
N - Tentatively identified compound based on mass spectral library search

S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
E - Value above quantitation range
H - Hold Time exceedance



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Certificate of Analytical Results

Date: 23-Aug-16

CLIENT: ALS
1435 NorJohn Court #1
Burlington, ON L7L 0E6

Lab Order: R16080012

Project: Picatinny Arsenal

Lab ID: R16080012-07 **Date Received:** 08/08/2016 **Date Sampled:** 07/28/2016 17:00
Client Sample ID: PY-2002S Slurry Waste Feed **Matrix:** SOLID

Analyses	Result	Limit	Qual	Units	DF	Date Analyzed
GRAVITY Density	8.680	D1298 0.001000		lbs/gal	1	Analyst: KKUS 8/17/2016

Lab ID: R16080012-08 **Date Received:** 08/08/2016 **Date Sampled:** 07/28/2016 17:00
Client Sample ID: PY-2002L Slurry Waste Feed **Matrix:** AQUEOUS

Analyses	Result	Limit	Qual	Units	DF	Date Analyzed
GRAVITY Density	8.430	D1298 0.001000		lbs/gal	1	Analyst: KKUS 8/17/2016

Lab ID: R16080012-13 **Date Received:** 08/08/2016 **Date Sampled:** 07/29/2016 15:25
Client Sample ID: PY-3001S Slurry Waste Feed **Matrix:** SOLID

Analyses	Result	Limit	Qual	Units	DF	Date Analyzed
GRAVITY Density	7.590	D1298 0.001000		lbs/gal	1	Analyst: KKUS 8/17/2016

Lab ID: R16080012-14 **Date Received:** 08/08/2016 **Date Sampled:** 07/29/2016 15:25
Client Sample ID: PY-3001L Slurry Waste Feed **Matrix:** AQUEOUS

Analyses	Result	Limit	Qual	Units	DF	Date Analyzed
GRAVITY Density	8.430	D1298 0.001000		lbs/gal	1	Analyst: KKUS 8/17/2016

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Qualifiers:

BRL - Below Reporting Limit
J - Analyte detected below quantitation limits
B - Analyte detected in the associated Method Blank
* - Value exceeds Maximum Contaminant Level
N - Tentatively identified compound based on mass spectral library search

S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
E - Value above quantitation range
H - Hold Time exceedance

Stericycle Environmental Solutions

Date: 23-Aug-16

CLIENT: ALS
Project: Picatinny Arsenal
Lab Order: R16080012

CASE NARRATIVE

ID#	Total Vol (mls)	ID#	Total (grams)
PY1001L	500	PY1001S	63.5
PY1003L	135	PY1003S	19.5
Py2001L	640	PY2001S	80.0
PY2002L	645	PY2002S	56.5
PY2005L	205	PY2005S	29.5
PY2006L	275	PY2006S	37.5
PY3001L	500	PY3001S	46.0
PY3003L	300	PY3003S	26.5
PY1002L	150	PY1002S	9.5
PY2003L	200	Py2003S	25.5
PY2004L	260	PY2004S	49.0
PY3002L	140	PY3002S	48.5

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